CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

~~SECRET~~
SECURITY INFORMATION

50X1

COUNTRY	USSR (Moscow Oblast)/Germany (Soviet Zone)	REPORT	
SUBJECT	Soviet Methods and Trends in the Electronics Field	DATE DISTR.	22 September 1953
		NO. OF PAGES	8
DATE OF INFO.		REQUIREMENT	50X1
PLACE ACQUIRED		REFERENCES	50X1-HUM

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

50X1-HUM

2. In the attachment Gorki should be transliterated as Gorkiy throughout and on the final page, which is Enclosure (A), the following proper names should probably be changed as follows:

Schokin to Shokin
Sctschokin to Sotshokin
Mytischi to Mytishchi
Beljakof to Belyakov
Schalkova to Shchelkovo

50X1

50X1-HUM

Comment. The chart on the last page of this report lists four of the ministries as Communications Ministry, Post Ministry, Military Ministry, and Ministry of Interior; they should read in the same order as the Ministry of Communications Equipment Industry, Ministry of Communications, Ministry of Armed Forces, and Ministry of Internal Affairs.

~~SECRET~~

STATE	ARMY	NAVY	AIR	FBI		AEC		OSI EV	x		
#x	#x	#x	#x								

(Note: Washington Distribution Indicated By "X"; Field Distribution By "#".)

50X1

SECRET
SECURITY INFORMATION

REPORT [redacted] 50X1-HUM

COUNTRY : USSR (Moscow Oblast)/Germany (Soviet Zone)

DATE DISTR. 21 AUG 53

SUBJECT : Soviet Methods and Trends in the Electronic Field

NO. OF PAGES 6

PLACE ACQUIRED [redacted]

NO. OF ENCLS. 1 (LISTED BELOW)

DATE ACQUIRED [redacted]

SUPPLEMENT TO REPORT NO. 50X1-HUM

DATE OF IN[redacted]

THIS IS UNEVALUATED INFORMATION

50X1-HUM

[redacted]

1. [redacted]

2. [redacted]

Both KOTOWSKI and KAUFMANN have been, and are still working in Leningrad. They worked in an unknown plant in Leningrad until 1950-51, and were then assigned to Wald Institute in Leningrad. /This information confirms previous reports that these men were transferred to the Lesnolya (Wald) NII 380 Institute. This is probably because the Soviets wished them to forget the work they had previously done./ [redacted]

[redacted]

SECRET

SECURITY INFORMATION

50X1-HUM

the type of work that has been done by KOTOWSKI and KAUFMANN or FEUSSNER. was in the centrimetric region.

3.

Dr. BAYER is presently in East Germany working for the Post Ministerium.

BAYER also attended school with Dr. ROTTGARDT. When BAYER first arrived in the Soviet Union he worked at an institute in the USSR. this institute was supervised by the NKVD. Dr. BAYER came from the NKVD Institute to NII 160 where he was dissatisfied. He was transferred to Gorki, where he worked at a factory that manufactured condensers and resistors.

4.

in the USSR a German club was formed with Dr. STEIMEL as president and a Soviet woman, who was one of the organizers of the trade union in the Soviet Union, as secretary of the club. A club meeting was usually held weekly, but it was not necessary for the Germans to attend every meeting. At these meetings it was necessary for a major speech to be delivered. Usually this speech was given by Dr. STEIMEL, but on one occasion KLUGE gave a speech in place of Dr. STEIMEL.

50X1-HUM

5.

not think that the Soviets are capable of planning, producing, and distributing component parts within a three month period. In the USSR something is always in short supply. If you need a small quantity of an item, you never receive it. Likewise, if you needed an abnormal item it too was very difficult to obtain. This situation was greatly eased by 1951-1952. However it was still no better than the situation in East Germany

50X1-HUM

50X1

6. [redacted]

[redacted] the 50X1-HUM
Soviets cannot schedule all types of production for a three month period. This is true because even at NII 160, which had an excellent tube producing plant, nuts and bolts had to be manufactured there as they were needed. It must be remembered that the Soviets pay no attention to the cost of an item. If that item is needed it will be produced regardless of the number of man hours or money required to produce it. No shortage of tubes would exist regardless of the number of rejects that had to be thrown away in order to obtain the required number of good tubes. At NII 160 production of Soviet components was generally dated within a twelve month period of the date on the end item, rather than three months [redacted]

7. [redacted]

[redacted] three centimeter silicon detectors made by SCHLOEMILCH. These detectors were to be used with radar sets that had a maximum output of 300 kilowatts. [redacted] eight millimeter crystals which he worked with. [redacted] both the three centimeter and the eight millimeter crystals were to be installed in airborne radar equipment. Of the three centimeter crystal rectifiers, [redacted] 150 to 200 were produced daily. This however is strictly an estimation and might be subject to great error. It was a small number [redacted] There were also some 10 centimeter crystal rectifiers manufactured at NII 160, [redacted] They might possibly be used for fire control ground radar equipment. [redacted] 100 to 150 of the 10 centimeter rectifiers were produced daily. Ten centimeter klystrons were produced at NII 160 and three centimeter klystrons were produced at the Tashkent factory in Leningrad even though the tube was originally developed at NII 160. [redacted] the pro- 50X1-HUM
duction of these tubes was approximately the same as that of the crystals rectifiers. [redacted]

8. [redacted] Soviet ministries and their organizational units, which are believed to have an interest in electronic development and manufacturing. [redacted] electronic plants which are believed to be controlled by these ministries.

/See Enclosure (A)/ 50X1-HUM

[redacted] 50X1

9. [redacted]

Only items that have previously been developed will be mass produced, except when the military demands something new. The civilian consumer will definitely have to be satisfied with items that have previously been developed by other countries. In the event that the military requires some items previously produced for the civilian consumer, they will certainly have first priority.

10. [redacted]

Soviet philosophy is one of mass production, and that in many instances the item is sold to the people for less than the actual production cost. Two examples of this juggling of prices is that the Soviet Leica camera sells for 800 rubles, and a pair of shoes sells for 420 rubles. The big profits are made on such items as food and clothing, while the losses are on such items as electronics equipment and automobiles. 50X1-HUM

It may be possible for the same item to sell for two different prices depending on the position of the purchaser. A ZIM automobile can be purchased for 6,000 rubles by the people, but will cost an institute 12,000 rubles. There was a joke told by both the Soviets and the Germans at NII 160 about a Soviet stating that in the current five year plan everyone would own an automobile, and in the next five year plan, everyone would own an airplane. When the Soviet was asked why everyone would need an airplane, he replied, " to fly to Gorki to get a resistor."

11. [redacted]

The last five year plan called for a production total equal to that of the United States. This will not be accomplished, although the military figure will be more closely approached than will be the civilian goal. They are definitely copying western development, but they are also trying to initiate developments of their own. The young engineers are encouraged toward original development, and have excellent training in the field of electronics. They are somewhat weak in the practical application of various theories that have been worked out. It was helpful for the German engineers to work with the Soviet engineers because [redacted] always rely upon their mathematical solution. [redacted] never even checked their results, but accepted them as being true. The machines used by the Soviets are not as well finished nor as accurate as Western countries' machines. However, the Soviet worker has the ability to turn out a workable item on machinery which the western worker would refuse to work with.

50X1-HUM

50X1-HUM

12. [redacted] 50X1-HUM

[redacted] Rejects will always be a large economic problem of no importance to the Soviets whenever it tends to curtail the production of usable items. It is difficult to speak about the increased labor productivity without breaking the USSR down into certain regions. In Leningrad where industry has existed for a long period of time, the quality is good. In Moscow the problem is somewhat more difficult, but greater efforts are being made to train a greater number and raise the quality of Soviet engineers. At the present time one of the great stumbling blocks is that of training peasants to become technical workers. Although this problem is great, one would be surprised at the good work that a poorly trained peasant is presently producing.

13. [redacted]

Receiver type vacuum tubes were produced with captured equipment until 1948 or 1950. The first good quality tube producing equipment made in the USSR was being delivered [redacted] 50X1-HUM [redacted] This equipment had been developed by the NII 160 OKBM, and had been produced by a factory located in Moscow. The vacuum tube Selex machines were of the 48-stage type, and were capable of producing a tube approximately every ten seconds.

14. [redacted]

[redacted] Sachsenwerk, Radeberg was developing decimeter equipment to relay television programs [redacted] 50X1-HUM [redacted] Mr. GERHARDT and Dr. ROSENSTEIN of the Post Ministerium were to select sites for the location of decimeter equipment. They were doing this work at the direction of the Ministry of Interior, and it is believed that the net would be used by the military. The exact use of this net is unknown [redacted] /SPIEGEL was requested to discuss this 50X1-HUM subject, hoping that he was informed on a 14 to 18 unit decimeter net presently being installed in East Germany. Evidently he was not well informed on the location of each piece of equipment and knew only the general intended use of the net./

15. [redacted]

[redacted] the decimeter net will be used for this type of reporting, because it is relatively secret and affords rapid communication. [redacted] not believe that normal radio communication will be used because it is unreliable, and 50X1-HUM subject to monitoring by western countries; no [redacted] [redacted] telephones will be used because the East German telephone system is completely inadequate at this time. 50X1-HUM

16. [redacted] the cut-back was announced only for propaganda reasons, and will in no way affect the military scheduling and production of electronic items. [redacted] the second meeting of electronic experts was held as scheduled. [redacted] this meeting had taken place. [redacted] the third meeting, [redacted] was scheduled [redacted]

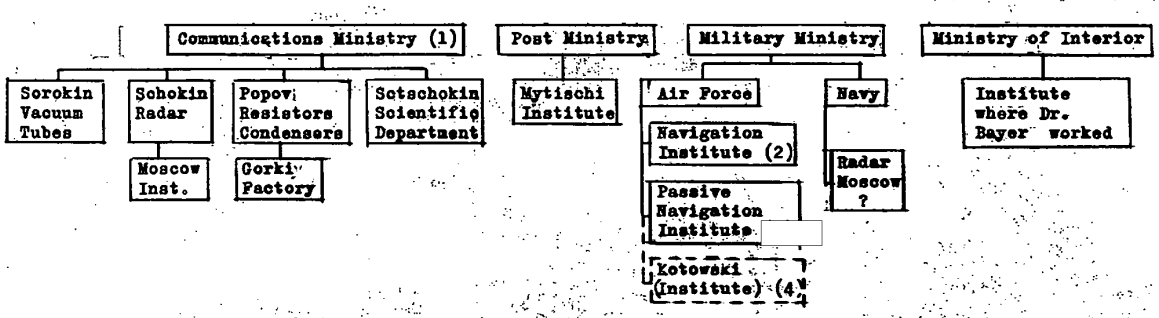
17. [redacted]

18. [redacted]

Dr. Kurt RICHTER, formerly at NII 160 and presently at OSW, 50X1-HUM in East Berlin, is probably the best man for writing a report on material and material processing. He has an over-all knowledge of the chemical and physical make-up of the materials used in the production of vacuum tubes. [redacted]

[redacted]

ENCLOSURE (A): Organizational Chart of Soviet Groups Concerned with Electronic Developments



Enclosure (A)
Page 1 of 1

50X1

50X1-HUM

1. From 1948 [redacted] MALENKOV, present leader of USSR, was in charge of the Ministry for Communications. Admiral BERG was his direct representative when BERG was at OSW in 1946.

50X1-HUM

2. An airforce institute for long and short navigation was located between Monino and Schalkova [redacted] J. The chief of this institute was General BELJAKOF, who was at OSW in 1946. Dr. STILLER, also at OSW in 1946, worked at this institute with General BELJAKOF. [redacted] these men worked there because they left the train at this place. The institute was located within the grounds of a military station and employed approximately 400 engineers. No production was accomplished at the institute, which was probably concerned with the development of a long range hyperbolic navigation system [redacted] J.

50X1

50X1-HUM

3. [redacted]

4. [redacted] this institute belongs to the airforce.

50X1-HUM

SECRET

SECRET

Soviet Groups Concerned with Electronic Developments

SECRET

50X1